Station 1

1.

Find an order in which the following functions can be stacked such that an initial input of 16 will yield a final output of –43.

$f(x) = -5x + 12$

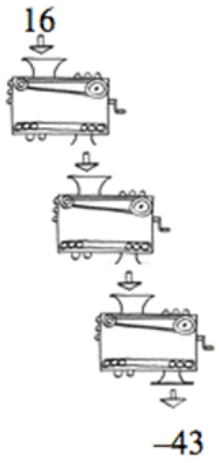
$g(x) = \sqrt{x}$

$h(x) = x^2 - 2x + 3$

Function 1: _____

Function 2: _____

Function 3: _____



Station 2

Given $f(x) = (x - 3)^2$

2. $f(3)$ 3. $f(-2)$ 4. $f(0)$

5. Find the value(s) of x for which $f(x) = 16$.

Station 3

The following equation is quadratic.

$$y + 8x - 8 = 3(x^2 + 2x) + 8x - 9$$

6. Rewrite this quadratic equation in standard form.

7. Solve the quadratic equation.

Station 4

Simplify each expression. Be sure that your answer has only positive exponents.

8. $(6x^4y^{12})(2x^2y^5)$

9. $(-5x^{-2}y^2)^3$

10. $\dfrac{(4xy^{-2}z^2)(2x^2y^4z)}{(2x^{-3}y^3z^{-1})^2}$

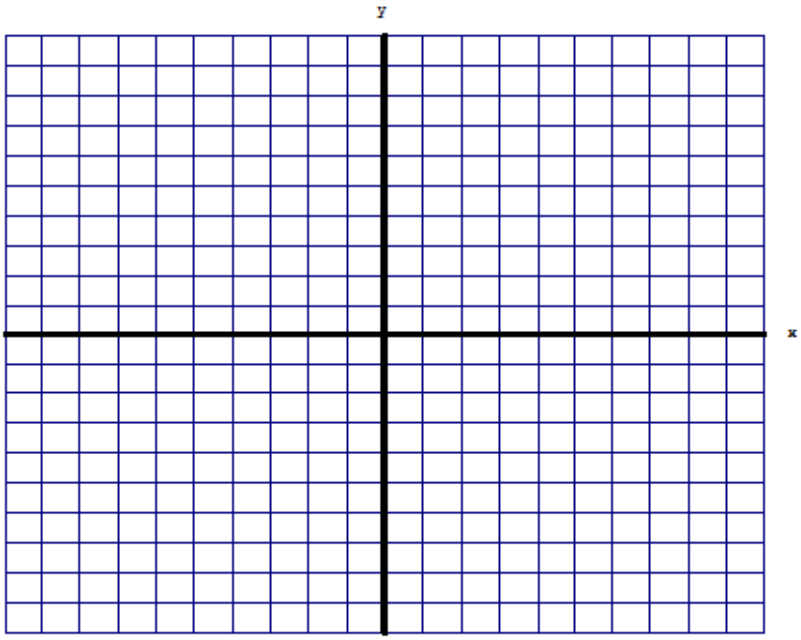
Station 5

11.

Draw a graph of the solution region for the system of inequalities below.

$$y > x^2 + x - 6$$

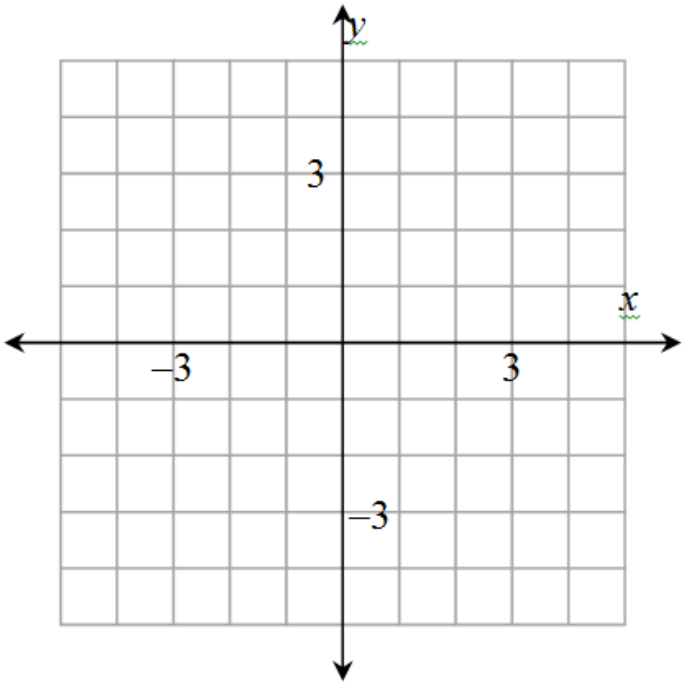
$$y > -\frac{2}{3}x + 3$$



Station 6

12.

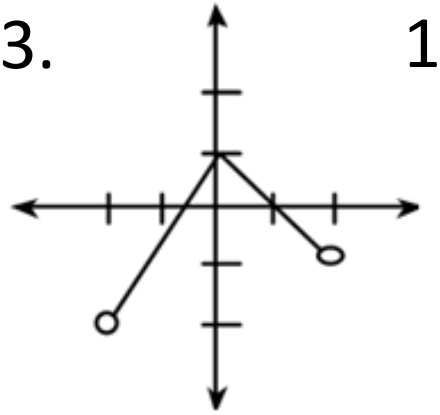
Sketch a graph with a domain of $-3 \leq x < 2$ and a range of $-4 < y \leq -1$.



Station 7

Identify the domain and range

13.



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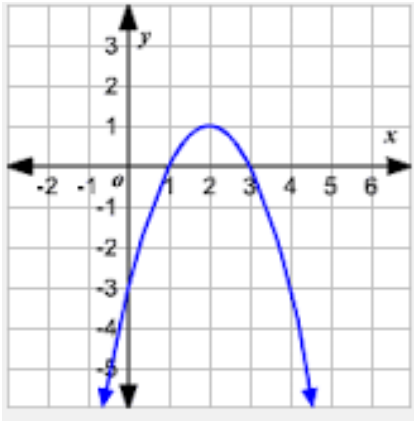

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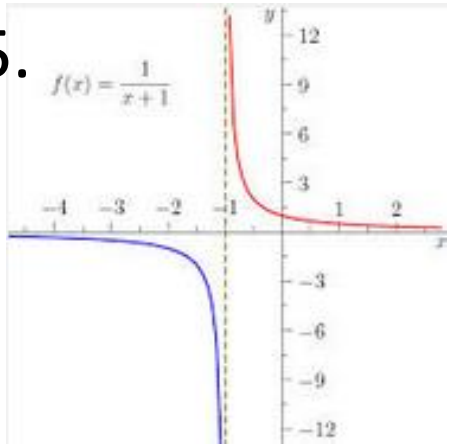

Station 8

16. Graph each equation on the same grid.

$$y = x^2 - 3x - 4$$

$$y = \frac{3}{5}x + 3$$

Then determine where the graphs intersect.

(,) & (,)

Station 9

Solve each equation using the specified method.

17. Quadratic formula $-3 = 3x^2 - 9x$

18. Inverses $18 = 3(x-2)^2$

19. Zero product property $0 = 6x^2 - 9x$

20. Algebra $16 = |2x - 4|$